

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/992,600B  
Source: FW16  
Date Processed by STIC: 3/7/05

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:58

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

3 <110> APPLICANT: Benjanin, Stephane  
 4 Tanaka, Hiroaki  
 6 <120> TITLE OF INVENTION: SERINE CARBOXYPEPTIDASE HX (SCPhx) AND COMPOSITIONS THEREOF  
 8 <130> FILE REFERENCE: G-091US04DIV  
 10 <140> CURRENT APPLICATION NUMBER: US 09/992,600B  
 C--> 11 <141> **CURRENT FILING DATE: 2001-11-13**  
 13 <150> PRIOR APPLICATION NUMBER: US 09/924,340  
 14 <151> PRIOR FILING DATE: 2001-08-06  
 16 <150> PRIOR APPLICATION NUMBER: PCT/IB01/01715  
 17 <151> PRIOR FILING DATE: 2001-08-06  
 19 <150> PRIOR APPLICATION NUMBER: US 60/305,456  
 20 <151> PRIOR FILING DATE: 2001-07-13  
 22 <150> PRIOR APPLICATION NUMBER: US 60/302,277  
 23 <151> PRIOR FILING DATE: 2001-06-29  
 25 <150> PRIOR APPLICATION NUMBER: US 60/298,698  
 26 <151> PRIOR FILING DATE: 2001-06-15  
 28 <150> PRIOR APPLICATION NUMBER: US 60/293,574  
 29 <151> PRIOR FILING DATE: 2001-05-25  
 31 <160> NUMBER OF SEQ ID NOS: 228  
 33 <170> SOFTWARE: JPatent  
 35 <210> SEQ ID NO: 1  
 36 <211> LENGTH: 2016  
 37 <212> TYPE: DNA  
 38 <213> ORGANISM: Homo sapiens  
 40 <220> FEATURE:  
 41 <221> NAME/KEY: 5'UTR  
 42 <222> LOCATION: 1..1434  
 44 <220> FEATURE:  
 45 <221> NAME/KEY: CDS  
 46 <222> LOCATION: 1435..1836  
 48 <220> FEATURE:  
 49 <221> NAME/KEY: 3'UTR  
 50 <222> LOCATION: 1837..2016  
 52 <220> FEATURE:  
 53 <221> NAME/KEY: polyA\_signal  
 54 <222> LOCATION: 1965..1970  
 56 <220> FEATURE:  
 57 <221> NAME/KEY: polyA\_site  
 58 <222> LOCATION: 2001..2016  
 60 <400> SEQUENCE: 1  
 61 aaggtctctc tgcattgcata caccaaggaa aagccacatg aggacataac caggaagaga 60  
 62 gccatcacca agaaccgcga catgcggaca ccttgatctc ggacttctag ccttcagaac 120  
 63 cgttgccaca gttttgatga tcatctctct cccaaccaag atggtggaaa aagcaaaaac 180

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:58

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

```

64 gtggtgaatc ttggagcaat ccgacaaggc atgaaacgct tccaatttct gttaaactgc 240
65 tgtgagccag ggacaattcc tgatgcctcc atcctagcag ctgccttgga tctactatgc 300
66 ggcattcttc tgattcattt ttctccattt gtgctgtttt tctctgtgat gtgaatccat 360
67 ccctatccat tatgtcatgc ctccatcttt tgctgtttct tcagattgca ctgagccata 420
68 agaggaagcc cctgtggtgg ccagagcagc cttgttcctg gaatgtgctc gttttgttca 480
69 ccgctgcaac cgtggcaact ggccagagtg gatgaaaggg caccacgtga acatcaccaa 540
70 gaaaggactt tcccggggac gctctcccat tgtgggcaac aagcgaaacc agaagctgca 600
71 gtggaatgca gccaagctct tctaccaatg gggagacaag gaaaaaagggt gaagaataaa 660
72 aggaaattca agaggacca gttttctgcta attttagaca gagctgaaca taaacacaca 720
73 taaagagggt ccatatattc ctcttttctt aaagattact tggataaact gttacaattt 780
74 ccgttaataa ttcagctgaa tgtgtctacc aatgtgctta ccaactaagg caattggcgt 840
75 ccgattgaat gagctgtgcc acggggaaag tgagagccca gccaacctgc tgggtctcat 900
76 ttacgatgaa gagaccaaga ggagacttag aaaggaggat gaggaggaag actttttaga 960
77 tgacattcca ctttcaagtc aatacacagc tcatcttgca tttaaaagct gattatggtg 1020
78 caagcaactt tccggctgga aattctacag aagcttgtct tttccattct tgatgagagg 1080
79 caaagtcccc ggcaacaaat taactcagga gagaaaatgg ttttctgaa aaaaacgata 1140
80 gcttaaatat ctacagaaag accgtaattt ccacctattt tcaaataaaa tcgtgaaaaa 1200
81 cacatttgga ctagagctga aacaacttca ctgccctcaa aacagcaaga cagacatccc 1260
82 tcataaaatg aactgacaga atttttatag ctccaaatct agttcactgc catatacata 1320
83 gtctaaatct gattgaatag cagcgtagaa atcttgcgaa attacttccc atttctgttt 1380
84 tcgttaaaag gtactgtgaa cccctctaaa tgcggttgcc cctttgcctt gaag atg 1437
85 Met
86 1
87 gca gca tgt cag ctt ctt ctg gag att acc acc ttc ctg cga gag acc 1485
88 Ala Ala Cys Gln Leu Leu Leu Glu Ile Thr Thr Phe Leu Arg Glu Thr
89 5 10 15
90 ttt tct tgc ctg ccc aga cct cgc act gag cct ctg gtg gct tca acg 1533
91 Phe Ser Cys Leu Pro Arg Pro Arg Thr Glu Pro Leu Val Ala Ser Thr
92 20 25 30
93 gac cac acc aaa atg cca tct caa atg gaa cac gcc atg gaa acc atg 1581
94 Asp His Thr Lys Met Pro Ser Gln Met Glu His Ala Met Glu Thr Met
95 35 40 45
96 atg ttt aca ttt cac aaa ttc gct ggg gat aaa ggc tac tta aca aag 1629
97 Met Phe Thr Phe His Lys Phe Ala Gly Asp Lys Gly Tyr Leu Thr Lys
98 50 55 60 65
99 gag gac ctg aga gta ctc atg gaa aag gag ttc cct gga ttt ttg gaa 1677
100 Glu Asp Leu Arg Val Leu Met Glu Lys Glu Phe Pro Gly Phe Leu Glu
101 70 75 80
102 aat caa aaa gac cct ctg gct gtg gac aaa ata atg aag gac ctg gac 1725
103 Asn Gln Lys Asp Pro Leu Ala Val Asp Lys Ile Met Lys Asp Leu Asp
104 85 90 95
105 cag tgt aga gat ggc aaa gtg ggc ttc cag agc ttc ttt tcc cta att 1773
106 Gln Cys Arg Asp Gly Lys Val Gly Phe Gln Ser Phe Phe Ser Leu Ile
107 100 105 110
108 gcg ggc ctc acc att gca tgc aat gac tat ttt gta gta cac atg aag 1821
109 Ala Gly Leu Thr Ile Ala Cys Asn Asp Tyr Phe Val Val His Met Lys
110 115 120 125
111 cag aag gga aag aag taggcagaaa tgagcagttc gctcctccct gataagagtt 1876
112 Gln Lys Gly Lys Lys

```

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:58

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

```

113 130
114 gtcccaaagg gtcgcttaag gaatctgccc cacagcttcc cccatagaag gatttcatga 1936
115 gcagatcagg acacttagca aatgtaaaaa taaaatctaa ctctcatttg acaagcagag 1996
116 aaagaaaaaa aaaaaaaaaat                                     2016
118 <210> SEQ ID NO: 2
119 <211> LENGTH: 134
120 <212> TYPE: PRT
121 <213> ORGANISM: Homo sapiens
123 <400> SEQUENCE: 2
124 Met Ala Ala Cys Gln Leu Leu Leu Glu Ile Thr Thr Phe Leu Arg Glu
125 1          5          10          15
126 Thr Phe Ser Cys Leu Pro Arg Pro Arg Thr Glu Pro Leu Val Ala Ser
127          20          25          30
128 Thr Asp His Thr Lys Met Pro Ser Gln Met Glu His Ala Met Glu Thr
129          35          40          45
130 Met Met Phe Thr Phe His Lys Phe Ala Gly Asp Lys Gly Tyr Leu Thr
131          50          55          60
132 Lys Glu Asp Leu Arg Val Leu Met Glu Lys Glu Phe Pro Gly Phe Leu
133 65          70          75          80
134 Glu Asn Gln Lys Asp Pro Leu Ala Val Asp Lys Ile Met Lys Asp Leu
135          85          90          95
136 Asp Gln Cys Arg Asp Gly Lys Val Gly Phe Gln Ser Phe Phe Ser Leu
137          100         105         110
138 Ile Ala Gly Leu Thr Ile Ala Cys Asn Asp Tyr Phe Val Val His Met
139          115         120         125
140 Lys Gln Lys Gly Lys Lys
141          130
143 <210> SEQ ID NO: 3
144 <211> LENGTH: 1081
145 <212> TYPE: DNA
146 <213> ORGANISM: Homo sapiens
148 <220> FEATURE:
149 <221> NAME/KEY: 5'UTR
150 <222> LOCATION: 1..38
152 <220> FEATURE:
153 <221> NAME/KEY: CDS
154 <222> LOCATION: 39..917
156 <220> FEATURE:
157 <221> NAME/KEY: 3'UTR
158 <222> LOCATION: 918..1081
160 <220> FEATURE:
161 <221> NAME/KEY: polyA_signal
162 <222> LOCATION: 1045..1050
164 <220> FEATURE:
165 <221> NAME/KEY: polyA_site
166 <222> LOCATION: 1066..1081
168 <400> SEQUENCE: 3
169 gtccagcctg ttgctgatgc tgccgtgcgg tacttgtc atg gag ctg gca ctg cgg 56
170                               Met Glu Leu Ala Leu Arg

```

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:58

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

```

171                                     -25                                     -20
172 cgc tct ccc gtc ccg cgg tgg ttg ctg ctg ctg ccg ctg ctg ctg ggc 104
173 Arg Ser Pro Val Pro Arg Trp Leu Leu Leu Pro Leu Leu Leu Gly
174                                     -15                                     -10                                     -5
175 ctg aac gca gga gct gtc att gac tgg ccc aca gag gag ggc aag gaa 152
176 Leu Asn Ala Gly Ala Val Ile Asp Trp Pro Thr Glu Glu Gly Lys Glu
177                                     1                                     5                                     10
178 gta tgg gat tat gtg acg gtc cgc aag gat gcc tac atg ttc tgg tgg 200
179 Val Trp Asp Tyr Val Thr Val Arg Lys Asp Ala Tyr Met Phe Trp Trp
180                                     15                                     20                                     25
181 ctc tat tat gcc acc aac tcc tgc aag aac ttc tca gaa ctg ccc ctg 248
182 Leu Tyr Tyr Ala Thr Asn Ser Cys Lys Asn Phe Ser Glu Leu Pro Leu
183 30                                     35                                     40                                     45
184 gtc atg tgg ctt cag ggc ggt cca ggc ggt tct agc act gga ttt gga 296
185 Val Met Trp Leu Gln Gly Gly Pro Gly Gly Ser Ser Thr Gly Phe Gly
186                                     50                                     55                                     60
187 aac ttt gag gaa att ggg ccc ctt gac agt gat ctc aaa cca cgg aaa 344
188 Asn Phe Glu Glu Ile Gly Pro Leu Asp Ser Asp Leu Lys Pro Arg Lys
189                                     65                                     70                                     75
190 acc acc tgg ctc cag gct gcc agt ctc cta ttt gtg gat aat ccc gtg 392
191 Thr Thr Trp Leu Gln Ala Ala Ser Leu Leu Phe Val Asp Asn Pro Val
192                                     80                                     85                                     90
193 ggc act ggg ttc agt tat gtg aat ggt agt ggt gcc tat gcc aag gac 440
194 Gly Thr Gly Phe Ser Tyr Val Asn Gly Ser Gly Ala Tyr Ala Lys Asp
195                                     95                                     100                                     105
196 ctg gct atg gtg gct tca gac atg atg gtt ctc ctg aag acc ttc ttc 488
197 Leu Ala Met Val Ala Ser Asp Met Met Val Leu Leu Lys Thr Phe Phe
198 110                                     115                                     120                                     125
199 agt tgc cac aaa gaa ttc cag aca gtt cca ttc tac att ttc tca gag 536
201 Ser Cys His Lys Glu Phe Gln Thr Val Pro Phe Tyr Ile Phe Ser Glu
202                                     130                                     135                                     140
203 tcc tat gga gga aaa atg gca gct ggc att ggt cta gag ctt tat aag 584
204 Ser Tyr Gly Gly Lys Met Ala Ala Gly Ile Gly Leu Glu Leu Tyr Lys
205                                     145                                     150                                     155
206 gcc att cag cga ggg acc atc aag tgc aac ttt gcg ggg gtt gcc ttg 632
207 Ala Ile Gln Arg Gly Thr Ile Lys Cys Asn Phe Ala Gly Val Ala Leu
208                                     160                                     165                                     170
209 ggt gat tcc tgg atc tcc cct gtt gat tgc gtg ctc tcc tgg gga cct 680
210 Gly Asp Ser Trp Ile Ser Pro Val Asp Ser Val Leu Ser Trp Gly Pro
211                                     175                                     180                                     185
212 tac ctg tac agc atg tct ctt ctc gaa gac aaa ggt ctg gca gag gtg 728
213 Tyr Leu Tyr Ser Met Ser Leu Leu Glu Asp Lys Gly Leu Ala Glu Val
214 190                                     195                                     200                                     205
215 tct aag gtt gca gag caa gta ctg aat gcc gta aat aag ggg ctc tac 776
216 Ser Lys Val Ala Glu Gln Val Leu Asn Ala Val Asn Lys Gly Leu Tyr
217                                     210                                     215                                     220
218 aga gag gcc aca gag ctg tgg ggg aaa gca gaa atg atc att gaa cag 824
219 Arg Glu Ala Thr Glu Leu Trp Gly Lys Ala Glu Met Ile Ile Glu Gln
220                                     225                                     230                                     235

```

## RAW SEQUENCE LISTING

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:58

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

```

221 gta aaa agg gga aac act cag agg cta gcc tgc ttg gct ttt tct ggt      872
222 Val Lys Arg Gly Asn Thr Gln Arg Leu Ala Cys Leu Ala Phe Ser Gly
223      240      245      250
224 ggg tac agg gcc cat ggt tgg tgt tgt caa act tgg agt cta cac      917
225 Gly Tyr Arg Ala His Gly Trp Cys Cys Gln Thr Trp Ser Leu His
226      255      260      265
227 tgaggctccc cacatatctg caaatgattg catgctggat aataaatctc ttgggtctaa  977
228 gcagtgatgt agtggctcct tacagagtca gaaagccacc caggcctgca agacttgctt 1037
229 gtccttcact aaatgtatgg attctattaa aaaaaaaaaa aaaa      1081
231 <210> SEQ ID NO: 4
232 <211> LENGTH: 293
233 <212> TYPE: PRT
234 <213> ORGANISM: Homo sapiens
236 <220> FEATURE:
237 <221> NAME/KEY: SIGNAL
240 <222> LOCATION: -26...-1
242 <400> SEQUENCE: 4
243 Met Glu Leu Ala Leu Arg Arg Ser Pro Val Pro Arg Trp Leu Leu Leu
244      -25      -20      -15
245 Leu Pro Leu Leu Leu Gly Leu Asn Ala Gly Ala Val Ile Asp Trp Pro
246      -10      -5      1      5
247 Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val Arg Lys Asp
248      10      15      20
249 Ala Tyr Met Phe Trp Trp Leu Tyr Tyr Ala Thr Asn Ser Cys Lys Asn
250      25      30      35
251 Phe Ser Glu Leu Pro Leu Val Met Trp Leu Gln Gly Gly Pro Gly Gly
252      40      45      50
253 Ser Ser Thr Gly Phe Gly Asn Phe Glu Glu Ile Gly Pro Leu Asp Ser
254      55      60      65      70
255 Asp Leu Lys Pro Arg Lys Thr Thr Trp Leu Gln Ala Ala Ser Leu Leu
256      75      80      85
257 Phe Val Asp Asn Pro Val Gly Thr Gly Phe Ser Tyr Val Asn Gly Ser
258      90      95      100
259 Gly Ala Tyr Ala Lys Asp Leu Ala Met Val Ala Ser Asp Met Met Val
260      105      110      115
261 Leu Leu Lys Thr Phe Phe Ser Cys His Lys Glu Phe Gln Thr Val Pro
262      120      125      130
263 Phe Tyr Ile Phe Ser Glu Ser Tyr Gly Gly Lys Met Ala Ala Gly Ile
264      135      140      145      150
265 Gly Leu Glu Leu Tyr Lys Ala Ile Gln Arg Gly Thr Ile Lys Cys Asn
266      155      160      165
267 Phe Ala Gly Val Ala Leu Gly Asp Ser Trp Ile Ser Pro Val Asp Ser
268      170      175      180
269 Val Leu Ser Trp Gly Pro Tyr Leu Tyr Ser Met Ser Leu Leu Glu Asp
270      185      190      195
271 Lys Gly Leu Ala Glu Val Ser Lys Val Ala Glu Gln Val Leu Asn Ala
272      200      205      210
273 Val Asn Lys Gly Leu Tyr Arg Glu Ala Thr Glu Leu Trp Gly Lys Ala
274      215      220      225      230

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 03/07/2005  
PATENT APPLICATION: US/09/992,600B      TIME: 11:28:59

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt  
Output Set: N:\CRF4\03072005\I992600B.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:27; Xaa Pos. 116,233  
Seq#:28; Xaa Pos. 116,233  
Seq#:29; Xaa Pos. 30  
Seq#:30; Xaa Pos. 29  
Seq#:71; Xaa Pos. 157  
Seq#:72; Xaa Pos. 156  
Seq#:113; Xaa Pos. 42  
Seq#:207; Xaa Pos. 81

## VERIFICATION SUMMARY

DATE: 03/07/2005

PATENT APPLICATION: US/09/992,600B

TIME: 11:28:59

Input Set : D:\G-091US04DIV-Subst-Seq-List.txt

Output Set: N:\CRF4\03072005\I992600B.raw

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:1497 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:502  
M:341 Repeated in SeqNo=27  
L:1565 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:112  
M:341 Repeated in SeqNo=28  
L:1625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:500  
L:1688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:48  
L:4130 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:529  
L:4197 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:160  
L:6722 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113 after pos.:32  
L:8257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:207 after pos.:80